

# THE NAUTILUS

Vol. 50

January, 1937

No. 3

## THE TYPE LOCALITY OF *OREOHELIX* *STRIGOSA* (GOULD)

BY ALLYN G. SMITH

Who collected the first specimens of *Oreohelix strigosa* (Gould) and where were they found?

This is a question that has piqued the interest of students of this genus of West American land snails for a long time and probably it can never be answered with exactitude. However, some new material collected relatively recently on the Columbia River in Washington, has revived interest in the type locality of *strigosa*, and this, together with a review of the itineraries of the explorers to whom its discovery is attributed, have led to some deductions and conclusions that will, it is hoped, result in fixing the general locality, if not the exact place where it was discovered.

As is well known, *O. strigosa* was described from shells collected in 1841 by the U. S. Exploring Expedition under the leadership of Commander Charles Wilkes. The locality was first given by Gould as the "Interior of Oregon,"<sup>1</sup> a sizeable territory, as the "Oregon" of that day included what is now the states of Oregon, Washington, Idaho, and part of Montana, its nebulous boundary extending northward into British Columbia. In 1856, ten years after it was described, Gould figured *strigosa*, and in 1852 said that it "Inhabits Puget Sound (Pickering): Columbia River (Drayton)."<sup>2</sup>

Conchologists interested in *Oreohelix* have known for a long time that Puget Sound as a locality for *strigosa* was an error, and out of the probable range of the genus. The Columbia

<sup>1</sup> Gould, A. A. Proc. Boston Soc. Nat. Hist. vol. 2, 1846, p. 146.

<sup>2</sup> Gould, A. A. U. S. Explor. Exp. Moll. 1852, p. 36; Atlas, 1856, pl. 3, figs. 41, 41a, 41b.

River, however, being partly in the "interior of Oregon" remained as the possible territory in which to look for the "lost" species, but even this presented some difficulties, as the river is about 1400 miles long from source to mouth. Perhaps this explains the fact pointed out by Henderson in 1929,<sup>3</sup> that "three quarters of a century have elapsed and no one has found it in either the Puget Sound Basin or along the Columbia River, but for that matter no one has found it with any certainty anywhere else." Even the experienced collectors J. G. Cooper and Henry Hemphill, who did much work along the Columbia, did not come across it.

Commander Wilkes' narrative of the U. S. Exploring Expedition<sup>4</sup> not only makes interesting reading for those who like early discovery but it provides information on the possible type locality of *O. strigosa*. Two of the Expedition's overland parties are of special significance.

The first of these was commanded by Lt. R. E. Johnson and among its personnel was Charles Pickering, Expedition naturalist, and J. D. Brackenridge, assistant botanist. After leaving the base at Fort Nisqually, this party crossed the Cascades (probably at Natches Pass) and reached the Columbia River somewhere near Vantage Ferry. They went north along the west bank, crossed the Wenatchee and Entiat Rivers by means of Indian canoe, crossed the river three miles north of Entiat and then went out of the valley of the Columbia, not reaching the river again until their arrival at Fort Okonagon, at the mouth of the Okonagon River. They then explored the Grand Coulee and proceeded north, reaching the Columbia a third time and followed it to Fort Colville. From Fort Colville the party went into Idaho, then came south to Walla Walla, proceeded up the Columbia River to the Yakima River which they followed upstream, finally crossing the Cascade Mts. on the way back to their base the same point as before. According to Wilkes, this party made a large addition to the plant collection but unfortunately he did not mention any other specimens that may have been obtained.<sup>5</sup>

<sup>3</sup> Henderson, Junius. Univ. Colorado Studies, vol. 17, no. 2, 1929, pp. 88-89.

<sup>4</sup> Wilkes, Charles. U. S. Explor. Exped. vol. 4, 1849.

<sup>5</sup> *Ibid.*, p. 170.

The second party was really a one-man expedition, undertaken by the Expedition's artist, Mr. Joseph Drayton, who accompanied a Hudson Bay Company boat "brigade" carrying supplies to the forts up the river and to interior posts. The trip proved strenuous as portages had to be made around the Cascades of the Columbia, the Dalles, and the mouth of the Deschutes River. Drayton left the brigade at Fort Walla Walla, visited Dr. Marcus Whitman at his mission, and made a horseback trip to the Blue Mountains. Returning to the Fort, he remained there thirteen days sketching and making notes and then proceeded to the Cascades of the Columbia on horseback, taking five days for the trip, and finished his journey to Fort Vancouver by boat. Drayton also did some collecting as Wilkes testifies at several points in his narrative.<sup>6</sup> Later he drew the figures for many of the beautiful illustrations for the reports for the Expedition, including those of *O. strigosa*.<sup>7</sup>

Although Gould mentioned Drayton as one of the collectors of *O. strigosa*, one is led to question this in view of his itinerary up the Columbia River, the short time that must have been available for collecting en route, and the results of more recent work. The fact that Dr. Pickering, with Lieut. Johnson's party, is also mentioned is significant in view of later findings and because the "Puget Sound" locality is now recognized as an obvious error.

Some of the ground explored by the Johnson party and by Drayton was covered by the writer in 1931 and is now accessible over excellent paved highway. *Oreohelix*, conforming closely with Gould's original description except for average size and color-banding, was collected in rock slides at the confluence of the Entiat River with the Columbia, about 15 miles south of the lower end of Lake Chelan. This locality is interesting in view of the following passage from Wilkes on the itinerary of Lieut. Johnson's party:

"On the 6th, after travelling seven miles they reached the banks of a small stream, called by the Indians Entitecoom, but known to the Canadian Voyaguers as Point de Bois. . . ."<sup>8</sup>

<sup>6</sup> *Ibid.*, pp. 315, 366, 378, 380.

<sup>7</sup> *Ibid.*, p. 324.

<sup>8</sup> *Ibid.*, p. 431.

Being one hundred feet wide at the mouth and too deep to ford "they therefore continued up [this] stream for about a mile and a half" without finding a suitable place to cross, returned to the mouth, were ferried across in canoes with Indian assistance, proceeded north along the Columbia for three miles, and then were forced to cross it, again with the help of friendly Indians.

Inasmuch as a few additional specimens of the same race of *Oreohelix* were collected four miles north of the mouth of the Entiat River in 1931 it would have been possible for Dr. Pickering to have collected *Oreohelix* in the exact same place, or very near it, in the process of taking botanical and other specimens. The north bank of the Columbia, for several miles above and below the Entiat, is close to the valley wall, which is precipitous and covered toward its base with talus slides that would afford excellent cover for *Oreohelix*.

William B. Marshall, late of the U. S. National Museum, kindly supplied information on the type specimen of *O. strigosa*, and commented on a series of shells from Entiat that were forwarded to him for comparison.<sup>9</sup>

He wrote:

"We have the specimen figured in the Exploring Expedition and it is no. 5441 of our collection, is marked type, and the locality given as Puget Sound. There is no doubt that it is the specimen shown in plate 3, figures 41, 41a, and 41b. . . . The specimen that we have here and that we regard as type, is smaller than the measurement given by Gould. Its diameter is only  $\frac{3}{4}$  of an inch. This would be in the neighborhood of 4mm. less than the  $\frac{9}{10}$  of an inch given by Gould."

"Of the Entiat specimens I may say they are larger, the aperture is somewhat rounder and less oblique than the type, the basal and interior colors of the specimen returned to you are almost exactly like the type and the colors of the spire are very similar, but in the one returned there are here and there faint indications of narrow spiral bands, and in most of the specimens kept here there is a distinct spiral chestnut band. The type has no band in the upper surface. The returned specimen [now Calif. Acad. Sci. No. 5843] has the nucleus a little larger than in the type but some of those kept here have the nucleus about the same size as in the type."

Thus it seems logical to assume that the type locality of *O. strigosa* can be fixed definitely in the Valley of the Columbia River, probably at the point where the Entiat River enters it, or at least not far from this point. Farther down the Columbia, between Celilo and Rufus, on the Oregon side of the river, *O.*

<sup>9</sup> Marshall, Wm. B. Letters dated October 24, and November 17, 1931.

*variabilis* Henderson is found. Farther up the river, on the steep slope bordering the south side of Lake Chelan, a totally different race was collected. However, much collecting must yet be done over a considerable territory along the Columbia above Umatilla before the limits of the range of typical *O. strigosa* can be defined.

---

## THE FAMILY *CYPRAEIDAE* IN THE HAWAIIAN ISLANDS

BY WILLIAM M. INGRAM  
University of Hawaii

The confusion which results from the inclusion, in various collections of and articles on Hawaiian *Cypraeidae*, of cowries which do not occur within hundreds of miles of the Hawaiian archipelago, warrants a paper which segregates the Hawaiian species from those found in other regions of the Pacific. This article will summarize in a check-list those species which are found in Hawaii, eliminating those which are foreign.

Of the many species of the genus *Cypraea*, twenty-nine are found in Hawaii. Most of these may be taken in the shallow reef waters, although with the exception of *Cypraea caput-serpentis* L., none is common. The author has collected eleven species of the total number, and has obtained three in the fossil state.

To Mr. Jens Mathias Ostergaard I wish to express my sincere appreciation for his helpful encouragement and assistance. I am indebted to Mr. David Thanuum for the use of specimens in his private collection, and to Mr. Edward Bryan for his courtesy in allowing me to use the shells housed in the Bernice P. Bishop Museum, Honolulu.

CYPRAEA ARENOSA Gray, Zool. Jour., i, p. 147, pl. 7, 12, f. 6, 1824

This species is dying out in the Hawaiian Islands and is very rare.

In 1905 Mr. Jens M. Ostergaard collected four individuals from the Honolulu Harbor dredgings.

There are three specimens in the L. A. Thurston collection which is housed in the Bernice P. Bishop Museum, Honolulu.